

NEW RECORDS OF MAYFLIES (EPHEMEROPTERA) FROM ALBERTA, CANADA¹

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ABSTRACT: Eleven species of Ephemeroptera are reported from Alberta for the first time. Among them, the reports of *Ametropus ammophilus* and *Baetisca columbiana* also represent the first records from Canada. The validity of *B. columbiana* and the status of the genus *Baetisca* in western North America are discussed. A total of 122 mayfly species are now known from Alberta.

KEY WORDS: Ephemeroptera, mayflies, Alberta (Canada), new records.

In their compendium of Canada mayflies, McCafferty and Randolph (1998) reported 102 species of mayflies from Alberta, Canada. Jacobus and McCafferty (2001) reported an additional nine species [although *Pseudocloeon dardanum* (McDunnough) was previously reported from Alberta by Soluk (1981)], and Sun et al. (2002) described a new species from southern Alberta. A previous report of *Baetisca obesa* (Say) from Alberta by Lehmkuhl (1972) is applicable to *B. laurentina* McDunnough (Pescador and Berner 1981) and should not be included in the Alberta species list. This brought the total number of species known from Alberta prior to this study to 111. Herein, we report an additional 11 species. Collections were made by, and are in the possession of, JMW, unless otherwise indicated as being deposited in the Purdue Entomological Research Collection (PERC).

Ametropodidae

Ametropus ammophilus Allen and Edmunds. Material examined: 20 larvae, Wapiti R. at Hwy 40, IX-4-2001; 2 larvae, Wapiti R. at Hwy 13, IX-5-2001.

Baetidae

Baetis brunneicolor McDunnough. Material examined: 3♂ and 3♀ imagos, Bigoray R, VIII-15-1973, no collector indicated (PERC).

Fallceon quilleri (Dodds). Material examined: 4 larvae, Milk R north of Aden, VII-31-1999; 3 larvae, 1 ♂ subimago, South Saskatchewan R at Hwy 879, VII-31-1999, VIII-1-1999; 2 ♂ imagos, Red Deer R, VII-7-2003.

Heterocloeon anoka (Daggy). Material examined: 1 larva, Athabasca R at junction with Calling R, IX-10-2001; 1 larva, Milk R north of Aden, VII-31-1999.

The taxonomic status of the species [formerly considered a synonym of *Plauditus punctiventris* (McDunnough)] will be elaborated on elsewhere by R. D. Waltz and WPM.

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Baetiscidae

Baetisca columbiana Edmunds. Material examined: 1 larva, Muskeg R 57°07'N 111°38' VII-16-1976, D. R. Barton (PERC).

Baetisca columbiana was definitively known only from the single larval holotype specimen collected by J. J. Davis in 1948 from the Columbia River in Franklin County, Washington (Edmunds 1960). Pescador and Berner (1981) repeated the species description in their revision of the genus *Baetisca* Walsh, but did not comparatively treat or key the species, doubting its legitimacy and indicating that the single specimen on which the original description was based had been lost. Pescador and Berner (1981) also did not believe that any *Baetisca* occurred west of the Continental Divide in North America, discounting reports of the genus by Eaton (1885) and Edmunds (1960) as being due to mislabeling of specimens. Since that time, however, *B. lacustris* McDunnough has been collected in Nevada (Baumann and Kondratieff 2000) and Idaho (Lester et al. 2002), and based on information from D. Goodger of the British Museum (pers. comm.), we consider the historical record of *B. obesa* (Say) from California by Eaton (1885) to be a misidentification of *B. lacustris*.

We recently confirmed the presence of the holotype of *B. columbiana* in the California Academy of Sciences and can confirm the distinctiveness of the species. Another larval specimen of *B. columbiana* was recently made available to us by G. Lester of Moscow, Idaho. Unfortunately, there were no specific locale data associated with the latter specimen, although according to Lester (pers. comm.), it presumably came from the Snake River in eastern Idaho.

A previous report of *B. columbiana* from Alberta by Barton (1980) was rejected by Pescador and Berner (1981), who considered the material on which it was based to represent an aberrant larval variant of *B. laurentina*. Our data here and the fact that the so-called variant of *B. laurentina* is morphologically similar to *B. columbiana* suggest that the Barton report was possibly valid.

Caenidae

Brachycercus edmundsi Soldán. Material examined: 7 ♂ imagos, Red Deer R, VII-7-2003.

Brachycercus prudens (McDunnough). Material examined: 6 larvae, Red Deer R. at Hwy 41, VIII-3-1999; 11 larvae, Milk R. north of Aden, VII-31-1999.

Heptageniidae

Heptagenia pulla (Clemens). Material examined: 8 larvae, Athabasca R at junction with Calling R, IX-10-2001; 7 larvae, South Saskatchewan R at Hwy 879, VIII-31-1999.

Leucrocota maculipennis (Walsh). Material examined: 6 larvae, South Saskatchewan R at Hwy 879, VIII-1-1999; 1 larva, Red Deer R at Jenner Bridge, VII-9-2003.

Leptohyphidae

Asioplax edmundsi (Allen). Material examined: 1 larva, Red Deer R. at Hwy 41, VIII-3-1999.

Oligoneuriidae

Lachlania saskatchewanensis Ide. Material examined: 21 larvae, Milk R. north of Aden, VII-31-1999.

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